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off, which were in a state of the calmest repose, with now and then a momentary 'cat's-paw' flitting fretfully across their bosom. In the extreme distance, bearing N. by W., lay Separation Point; whilst Adele Island and the other islets along the coast slept like turtles basking in the noon-day sun. Before us lay range over range in twisted and distorted shapes, each overlapping each, till stern, gloomy, and impassable, rose the rugged chain bounding on the W. the long-sought Wairoo, from the lowest gorges of which a number of minor streams and water-courses (forming, as some of the party conjectured, the source of the Pelorus) ran towards the N. and E. Behind us lay the Waimea valley, and beyond that the Moutere and Motuaka, the ranges separating which resembled, in the distance, from the heights on which we stood, a gentle undulating country. To the S., looking along behind the ridge of the blue range, the utmost possible variety of mountain scenery was visible."

## IV.—Western Australia.

THE efforts made to penetrate into the interior from this colony have been trifling compared with those made from New South Wales and South Australia. The subjoined journal of an excursion to the S.W. of York, undertaken by Messrs, Landor and Lefroy about the beginning of the present year, contains an indication which deserves to be followed up. A river coming from the W., about the 118th meridian E. of Greenwich, which appears to have been running at a more advanced period of the dry season than is generally the case with the rivers of that district, which had "a more water-worn" valley than other rivers, and which, where it was seen, flows through a country too arid to supply it with water, appears to indicate a high land in the direction of its sources. It is desirable that this track should be further explored. The journal of Messrs. Landor and Lefroy is in the form of a letter addressed to the editor of the Inquirer, a journal published at Perth, in Western Australia.

"SIR,—We send you the report of our expedition in search of the large inland sea, so often mentioned by the natives of the Hotham district. We took a native boy from York (Cowit) to shoot kangaroos, and to act as interpreter when our guides were unintelligible to us. We left York, with a packhorse carrying flour, tea, and sugar for one month, on the 9th of January, and, travelling along the Sound road 10 miles beyond the Dale barracks, we turned south-east into the bush to Corbiding, where we slept. The next day we went only 12 miles, to Nymbatilling, where we met our guides, Konak and Quallet. They are excellent natives, ready at all times to carry firewood or game, or to do any other little office we required of them.

"We left Nymbatilling early in the morning of the 12th, and passed

over a good sheep country 10 miles to Millangolling, a pool in the bed of the Hotham, which we crossed. After leaving Millangolling, we passed over 15 miles of a very bad, scrubby country to Boiamuc, also a pool on the Hotham. The river here runs from south to north, while at Millangolling its course was exactly the reverse. In the bad country we saw one mound spring called Byring, which was situated in an ironstone country, mound springs being generally found in land of a superior description.

"Day's journey 25 miles; course S.E.

- "13th.—It rained hard during last night, and until 4 o'clock in the afternoon. From 12 till 4 the rain came down harder than we remember to have seen it during the whole of last winter; of course we were completely drenched, but a good waterproof bag protected our sugar and tea. Notwithstanding the rain, we left Boiamuc early, and, crossing the river, we went 10 miles over a bad and flat country. The country then began to improve, and at Carbal there is a pool of water, and a very good sheep country on all sides of the gully. Three miles from Carbal there is a fine fertile valley, with a large mound spring, which the natives called Yungamening. We shortly crossed a ridge of hills, and descended into a long and broad valley of good feed, along which we travelled for two or three hours amidst most violent rain, to Narjaling, where we found three pools of good water, and excellent grass for our horses. The last 15 miles of this day's journey were over good land, which the natives said extended some days' journey to the east.
- "Twenty-four miles, S.E. "14th.—Before leaving Narjaling this morning, we walked to a hill 2 miles distant east, and saw a great extent of grassy country, but no appearance of a river or any large water-course. We pursued our route to the lakes for the first 5 miles over good land; then we came upon the ironstone, white gum country, occasionally varied by sand patches, with the red gum, and abundant plants of the well-known poison. After a 20 miles' ride, we crossed a large river flowing east, and 10 miles further we crossed another, or the same river flowing west; the country very bad on both rivers. We here saw a party of natives, who told us the river was the Williams. Having already gone 35 miles, we wanted to stay for the night, but the natives assuring us the lakes were only a little way off, we were persuaded to urge our tired horses on. The little way turned out to be at least 12 miles, and that over a soft and boggy country, occasional grassy valleys, but the hills covered with poison. About sundown we saw Lake Byriering, perhaps two miles long by one and a half; the water was fresh and excellent, but nowhere deep enough to cover the knees, for we walked all over it after the ducks, which were numberless. We were all tired, and intended to stay here on the next day, but as there was no grass for the horses, we were compelled to move to-morrow to Norring, only six miles distant.

"Day's journey 47 miles, S.E.

"15th.—We moved to Norring, a large salt lake about 6 miles by 3, exceedingly shallow, with long, flat, mud shores. The country to the east and south is bad; the northern and western sides of the lake are excellent. From a hill, high and grassy, on the north of the lake, we

had a fine view of the surrounding country to the east and south-east—long treeless plains of sand and scrub. At our feet was lake Quiliding, studded with islands in the most beautiful and varied forms. We never saw land and water so tastefully mingled.

"Day's journey 6 miles, S.W.

"16th.—The lake seen from north-east to south-west (Norring) was the westernmost we saw. Our explorations began where Mr. Harris's We could not persuade our native guides to take us east, so we were preparing to return, varying our route a little, when we fortunately met two other natives, who at once agreed to take us to the large lake to the eastward. After going 5 miles north we turned east, and came, in 3 miles, to Lake Barkiering. There is a good country on the western and northern sides of this lake, and the water only slightly brackish. We shortly passed another lake, 5 miles long, called by the natives Quiliwhirring, quite salt. Here the valley of the lakes divides, one valley running north-east, the other east by south. We left the valley and proceeded due east, crossing a hill and a bad country; but we saw a grassy hill to the south. In 10 miles we again came down to the valley, and, passing two lakes, we encamped on a large sheet of fresh water called Goondering. This lake was fuller than any of the others, and had evidently been lately supplied, as the water was rising in it when we were there, and had already flowed among the swamp oaks around its margin. Our day's journey was about 30 miles eastward. We had passed many lakes-first Norring, where we slept; then Quiliding, Byriering, Quabing, Barkiering, Quiliwhirring, and some others, to Goondering.

"Day's journey 30 miles, E.

"17th.—We marched along the valley, which is too thickly timbered to afford any view of the country. After riding 8 or 10 miles, we came in sight of Dambeling, the largest of the lakes—15 miles by 7 or 8. It is, like the others, shallow, with many low islands in varied and beautiful forms. On the northern and eastern shores there is a good grassy country down to the lake, ending in precipitous banks, and extending over the hills two or three miles distant from the lake. The water is salt, and the shores long, flat, and muddy, on which we saw the impressions of two stray horses and a foal. We rode along the southern shore for 8 miles, when we crossed a peninsula, and again came to the shore of the lake. A few miles brought us to a river coming from the north, emptying into the lake. Its bed was equal to that of the Mackie at York. Salt-water pools, flooded gums and tea-trees, gave it the usual appearance of an Australian river. We called it the Landor. A mile beyond the river we came to fresh water, and encamped.

"Day's journey 25 miles, E.

"18th.—We went due east for a few miles, when we fell in with a party of natives, one of whom accompanied us; but, after we had proceeded a short distance, the country became scrubby, without trees, sandy, and nearly level. In the foreground the scrub predominated, but the distance was a naked, sandy desert. The natives refused to take us into it, saying there was no water, and no feed for the horses, and that it was so hot no man could live there. We were obliged to turn north, and

soon crossed a large river at least 30 yards wide, pools full of fresh water, and a clayey bed. It had not ceased to run many days. We twice crossed the river, which appears to come from the east through the desert, and to empty itself into Lake Dambeling. We named it the Lefroy. The country on its banks is particularly bad. After turning north we passed over 5 or 6 miles of good country, and encamped on a pool of excellent water called Jualing.

"Day's journey 15 miles, first E., then N.N.W.

"19th.—Made a short journey to Wardaming, over a chequered country. Wardaming is a small pool in a gully, with good land about it. We here saw two Timor ponies, which joined our horses when feeding; one was a dark bay, the other lighter, and marked by a collar on both shoulders. We tried to catch them, but without success.

"15 miles, N.N.W.

"20th.—The ponies followed us a few miles. This day we crossed the worst country we had seen during the whole expedition. Whenever a rising hill gave us a view to the eastward we again saw the same endless desert, level and bounded only by the horizon. We crossed the north-east valley of the lakes, seeing the beds of two lakes, which were dry, with hard clay bottoms. Slept at Yaralmining.

"35 miles, N. by W.

"21st.—The whole day's journey was over a tolerable sheep country, badly watered, but a fair average feed, and plenty of poison. There is good water and excellent land at Yarlal. Slept at Darapmining.

" 29 miles, N.W.

"22nd.—This day we crossed the same kind of country to Warnup, a pool on a branch of the Hotham; we called it the Cowit.

"20 miles, W. by N.

"23rd -12 miles, over a good country to Nymbatilling.

"Remarks.—The land we crossed over during this expedition was for the most part of a very wretched character; the only extensive tract of tolerable country being that crossed on our outward course at Carbal and Narjaling, which is no doubt continuous with the more easterly country we saw at Yarlal and Darapmining on our return. There might be 50 miles or more between our two routes at those points. This country lies on the right bank of the Hotham, and on the small streams in which that river originates. There is no doubt a great area of this land, but its average character is far below the York district. Although many thousand acres of excellent land may doubtless be found, yet it will only be in patches, broken by much inferior land, which is infested with the poison.

"Throughout this country, until we arrived at the Cowit, there is no water for sheep; all flocks must be watered by wells or tanks. Between Narjaling and the Williams there was no land fit for any purpose whatever, and the country on either side of the Williams where we crossed it was particularly bad. From the river to the lakes the country was chequered, but the poison abundant. Were Lakes Quiliding and Norring fresh, there would be room for a few small flocks, but it perversely happens that the good land was on salt, while the bad abounded on the fresh-water lakes To the east of Dambeling there is nothing but scrub

and naked sand extending as far as the eye can carry, being level, and bounded only by the horizon. It is most probable that this desert extends from the southern to the north-west coast, being probably the same sterile country seen by Mr. Roe and his party east of York, and from Mr. Eyre's account extending quite down to the sea on the south. The scanty plains are of two kinds, the detritus of granite being one, upon which grows the banksia and a thick scrub. The other kind is covered with the ferruginous sand called ironstone, but which is simply nodules of clay rounded by the action of water, and coloured and hardened by the peroxide of iron. This kind of country is the most barren. We nowhere saw the high granite ranges in which Mr. Harris conjectures the Williams to rise, nor do they, we are confident, exist. country to the east of our homeward course is quite flat, and to the west they cannot be, or we should have seen them either going or returning. As we never saw either the Williams or Hotham on our return, we must have headed both those rivers. The Hotham rises in many small gullies in the good land we crossed, and is, like all the other rivers in this colony, a mere surface drain, flooded in heavy rains, but not supplied by any springs, and ceasing to run when the sun dries up the surface water. The Williams is the channel which conveys the surplus water of the north-east valley of the lakes to the sea, and is in wet seasons likely to run long before it drains away the water supplied by this chain of lakes, which in all likelihood extends far into the interior. not cross one single watercourse between Dambeling and Yaralmining, a distance of more than 50 miles. This remark more particularly applies to that part of the country sloping to the east, which was the most sterile we saw. In our opinion it is hopeless to look for good land east of the sources of those rivers which fall into the western ocean, at least until the desert is passed, when it is most likely the land will be too far from the settled parts of the colony, and divided by too terrible a barrier, ever to be available to this country. Though we cannot speak favourably of the land, we think that, in a geographical point of view, our discoveries may possess great interest.

"The general direction of the valley of the lakes is N.E. and S.W. We did not follow the valley to the S.W. below Norring, but it is probable that in heavy rains the accumulated waters of these lakes find an outlet by means of the Beaufort or the Gordon. There is no doubt the whole valley is one continuous stream in exceeding wet seasons, when all the lakes would be united, and present a truly magnificent appearance; but as the area of evaporation is so large, and the banks of many of the lakes high, the quantity of rain must be enormous before the valley can become a running river. Lake Barkiering, where the valley divides, has a very steep shore on the eastern side, about 15 feet above the present water-level, with three distinct marks of former water-levels. Between the present and the ancient shores there is a belt of swamp oaks and tea-trees. All the lakes have two shores, showing either a decrease of rain or an elevation of the land itself, probably both. Dambeling is by far the largest and most interesting of the lakes, and is the inland water so often mentioned by the natives, at least they have no knowledge of any other sheet of water more to the eastward. Many

streams flow into this lake, and with it terminates all appearance of a valley, unless the river Lefroy is a connexion with another distant and extensive reservoir. This river, in a geographical point of view, is an important discovery—the character of its bed, without trees, more waterworn than other rivers, its size, and the direction from which it flows, also the fact that it had been running so lately, render it exceedingly interesting to determine how it is supplied. The sandy nature of the country on its banks, and for many miles east, and the flatness of the country, preclude the idea that it received its supply from the immediately surrounding country. It must either be supplied by a country of better character far to the eastward, or it is the outlet of another and larger lake far in the interior. We are inclined to adopt the latter opinion, which is corroborated by an opinion of Colonel Gawler, who, in a late paper read to the Geographical Society, states his conviction that Lake Torrens is supplied by a much larger lake in the interior. It is probable that there is another outlet by the river Lefroy. From the natives we could learn nothing but that there were no kangaroos, no opossums, and no water, to the east; but, as their knowledge never extends more than 100 miles, their opinions are worthless. The northeast valley is narrower, and dry at this time of the year; probably less rain falls in it than in the other valley, for we found the one quite boggy and soft, while the other was baked and hard.

"The desert has a most repelling appearance, but it would be interesting to cross it at the proper season, which might be done by follow-

ing the river Lefroy in the month of August.

"An expedition across the desert would require to be conducted upon a larger scale than any private individual would like to afford, and therefore can only be successfully done by the government. A few light carts and a well mounted party might usefully and extensively add to the geography of the interior, and would not be met by any insuperable difficulties, if a proper time of the year were chosen for its departure.

HENRY LANDOR. H. M. LEFROY."

Perth, Feb. 2, 1843.

V.—Notes indicative of the Progress of Geographical Discovery.

Bombay Geographical Society of Bombay, in a letter dated the 19th June, 1843, acknowledging the receipt of Vol. XII. of the Royal Geographical Society's Journal, writes as follows:—"The touching allusion of the president to the loss of Dr. Heddle, Sir Alexander Burnes, and Dr. Lord, all most active in their exertions to promote the objects of this Society, has greatly gratified the members. They request me to express their gratitude for the kind and prompt consideration with which permission was granted by your Society to have a copy taken of the portrait of Sir Alexander Burnes.